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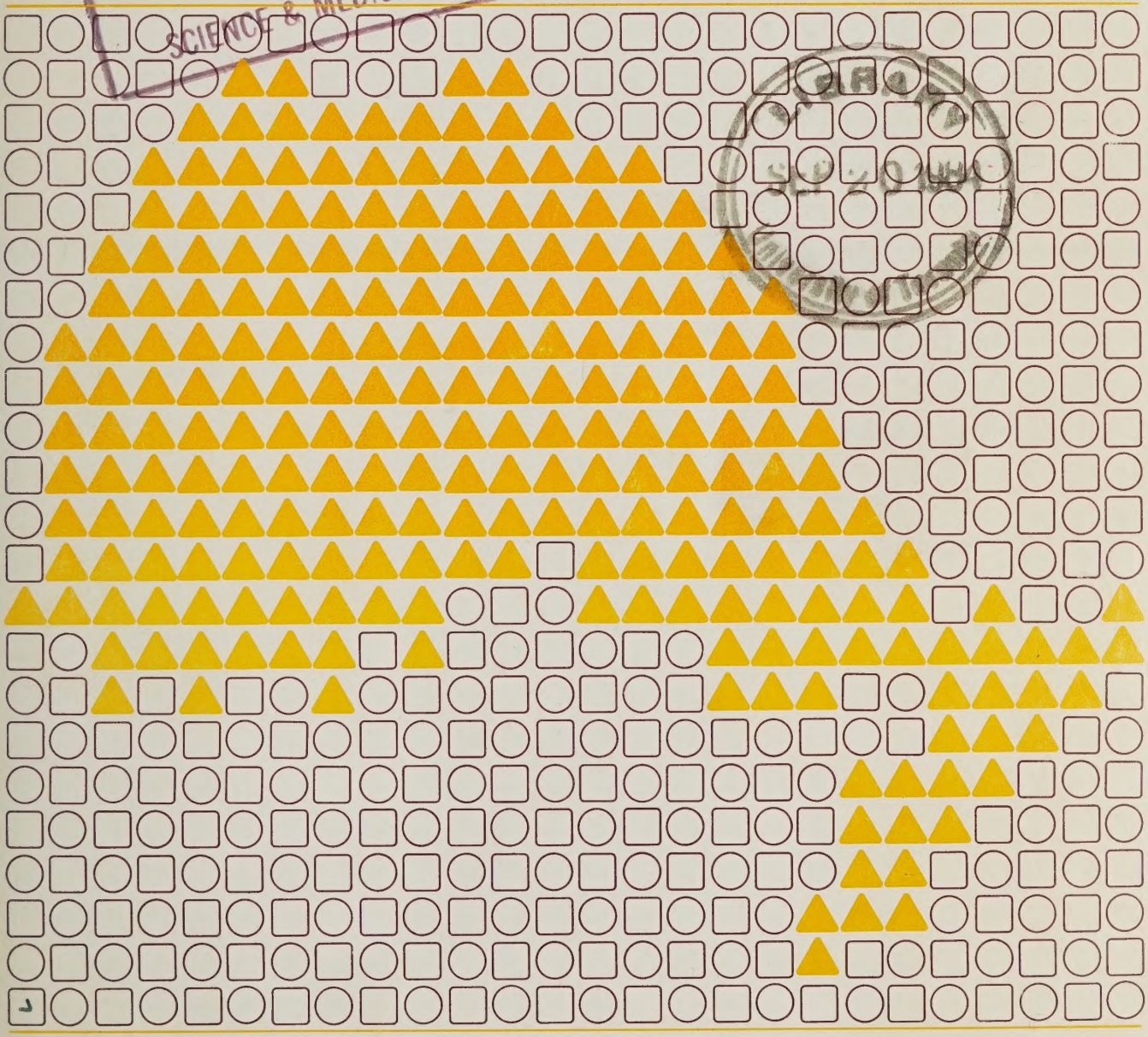
Occupational Health in Ontario

Volume 5, Number 3, July 1984

Equality Rights for People with Disabilities

Recent Developments in Workers' Compensation

Women in the Workplace and Occupational Health Hazards



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Occupational Health in Ontario

Volume 5, Number 3, July 1984

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Examples

1. Lee WR, and Miles S. Postgraduate preparation for occupational medicine. J Soc Occup Med 1976; 26: 115-119.
2. Department of Health and Social Security, Notes on the diagnoses of occupational diseases. Rev ed. London: HMSO., 1972.
3. Gamble JF, and Battigelli MC. Epidemiology. In: Clayton GD and Clayton FE. eds. Patty's industrial hygiene and toxicology. New York: McGraw Hill, 1978: Vol 1; 113-116.

R.G.L. Fairweather

Equality Rights for People With Disabilities

Summary

The role that the medical profession should play in the formulation of federal human rights legislation as it pertains to bona fide *occupational requirements and access standards is discussed.*
Case histories that illustrate the need for the profession's involvement are presented.

Recently, some social philosophers have been advancing the idea that one way to measure the development of a civilization is to examine the extent to which human rights have been guaranteed throughout a given society.

Our society, which prizes freedom above all, has decided that equality is an important and inseparable part of freedom, and that these advances alone, vastly important as they were, did not go far enough toward ensuring equality. Quite recently, we have arrived at a consensus that equality cannot work as long as discrimination is permitted.

Thus, we have seen Canada mount attacks on racism, religious discrimination, sexism and discrimination against disabled or elderly people. Freedom and equality of rights would be rather hollow concepts if they were restricted to Caucasian Protestant males under the age of 65.

The evolution I have been speaking of has been taking place over a very long period of time, but it has proceeded at a greatly accelerated rate during the last two decades in particular. And in the last 10 years, our attitudes, as manifested in human rights codes and similar expressions, have been evolving at a pace too fast for our other legal and regulatory instruments to keep.

We have, in a sense, entered unknown territory. Thus, it is not at all alarming, or even surprising to me, to find that there are some areas in which we have not yet reconciled the apparent contradictions that have been brought to the fore by our increased preoccupation with eliminating discrimination.

What I want to say is based upon a number of assumptions:

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November 11, 1983

*Presented to the First Annual Conference, Canadian Council of Occupational Medicine, Toronto, November 11, 1983.

First

The Canadian Human Rights Commission needs the involvement of the medical profession in the consultations we are organizing to prepare *bona fide* occupational requirements and access standards so that we can fulfil the legislative scheme of the recently amended *Canadian Human Rights Act.*

Second

The issue of medical standards requires a more flexible individual assessment and case-related approach, e.g. visual acuity standards on the railways.

Third

We have to remember that whether or not a complaint based on denial of employment or a service is substantiated by the CHRC, it cannot be resolved on the basis of medical opinions alone.

Fourth

Surprisingly, in the past, it has been our experience that the medical profession has not really come to grips with the need to understand the implications for its work of human rights legislation. The commission has initiated contact with the Canadian Medical Association and we want similar opportunities to talk about our shared concerns with the Canadian Council of Occupational Medicine.

Fifth

Mental disability is now part of human rights laws. We will require informed opinion about retardation, learning disability and psychiatric disability.

Sixth

It will be helpful if there could be more opportunities for disabled consumer groups and the medical profession to talk to each other.

The Bhinder case is a perfect example of the need to reconcile apparent contradictions.

I spoke about Mr. Bhinder to the Canada Safety Council in June of this year, and to say that the members of the council took my remarks as thought provoking would be putting it very mildly.

For those of you who have not been following Mr. Bhinder's history, let me sketch the situation.

Mr. Bhinder is a devout Sikh, and his religion requires the wearing of a turban. Nothing may be worn over it or under it, nor in substitution for it. He had been working as an electrician for 4½ years in the CN's Toronto rail yards when a *new safety hat policy was introduced.* Mr. Bhinder sincerely believed that his religion prevented him from wearing the hard hat required by a new safety code, and that it was reasonable in his particular job to work without one.

CN did not agree. It sought to dismiss him, and Mr. Bhinder appealed to the Canadian Human Rights Commission that his dismissal was an act of religious discrimination. He argued that the *Canadian Human Rights Act* guaranteed him the free practice of his religion, and that hence he should be able to refuse to wear a safety hat on religious grounds, so long as he was not creating an unacceptably dangerous situation.

At a hearing before an independent human rights tribunal, Mr. Bhinder won his case. CN appealed, and the Federal Court of Appeal found in favour of the company in a split decision. Mr. Justice LeDain wrote a very strong dissenting opinion, and the Canadian Human Rights Commission decided, in turn, to appeal because such an important issue was at stake. Mr. Bhinder's case is now before the Supreme Court of Canada.

The Bhinder case touches on many key areas: religious freedom, obviously, but also the concepts of *bona fide* occupational requirements, reasonable accommodation and safety. There are also the matters of a company's *intent* to discriminate (and thus, by implication, *de facto* and statistical discrimination), the purpose of health and safety codes, attitudes towards visible minorities who are becoming more and more obvious members of Canadian society, and the actuarial or cost basis of refusing to accommodate people like Mr. Bhinder.

Safety codes and regulations themselves were resisted at first because it was feared that they would interfere with the 'freedom' of business to make the greatest profit possible. Gradually, it dawned on people that safety codes and regulations were to the long-term good of all concerned. Today, everyone recognizes that a safe workplace benefits worker and

management alike and enhances profitability in the long run.

From one point of view, the Bhinder case may be regarded as a test between the validity of *bona fide* occupational requirements and the need for the reasonable accommodation of religious beliefs.

The human rights tribunal's decision was that, under the *Canadian Human Rights Act,* CN's safety hat
policy was not a *bona fide* requirement of his job, and that CN had a duty to accommodate Mr. Bhinder's religious belief by exempting him from this particular safety requirement. The tribunal's position, strongly supported by Mr. Justice LeDain, was that federal legislation and regulations must be construed and applied as subject to the *Canadian Human Rights Act.*
'The purpose of this Act is to extend the present laws in Canada to give effect . . . to the principle, etc.' Further, that employment requirements or conditions, even if imposed by or in compliance with federal regulations or legislation, must not, in their application, have a discriminatory effect. As part of the process of reconciliation to which I alluded earlier, the Supreme Court of Canada will render its final decision on the subject.

The Bhinder case has aroused a surprising amount of passion, as I witnessed in New Brunswick. It is my opinion that our society can easily afford to accommodate Mr. Bhinder without serious compromise to our philosophical commitment to on-the-job safety or safety regulations. The contradictions here, as in the early battles to establish the first health and safety codes, are more apparent than real.

Confirming the right of religious groups, such as the Sikhs, to practise their religion does not have to undermine health and safety regulations. In the United States and in the United Kingdom, Sikhs have had the right to wear their turbans in place of safety hats for years. There is no statistical evidence at all that on-the-job safety has suffered. The tribunal hearing Mr. Bhinder's case did not find that permitting this one particular employee, in his one particular job, to wear a turban, would significantly affect CN's operating risks or workers' compensation costs. From a statistical or actuarial view, the risks are negligible.

Yet this is the argument that I heard over and over again at the Canada Safety Council meeting. Although I know of no official studies that support

such a contention, I would hazard that insurance costs have gone up no more than an infinitesimal amount, if at all, because of Sikhs wearing turbans in the United States or the U.K. In fact, as ample evidence has shown at the various hearings, a turban actually provides more protection against certain types of blows to the head than a safety hat, although against other types of blows, less.

The issue of potential damage awards is a red herring. If a person falls off a ladder at work, he or she has a right to just compensation under insurance plans, workers' compensation or even via lawsuit. And despite the best of precautions and education programs, people do fall off ladders.

Yet the risk itself of using ladders is very small, and is accepted. Businesses where ladders are used are not refused insurance coverage as a result, nor have their insurance and workers' compensation rates skyrocketed. The actuarial risk and cost of using ladders is accepted as a normal expense of doing business.

'Ah,' you might say, 'but one sometimes *has* to use a ladder, while it is not necessary to let a worker wear a turban; someone else can do the job.' I say it is imperative that we let people like Mr. Bhinder practise their religion, even if that means letting them take certain acceptable risks. Otherwise our whole concept of human rights protection would be hollow.

As I said, I don't think that letting Mr. Bhinder wear his turban on the job would increase costs, and the risks are insignificant. Nor is it a case of 'If we let you do it, we'd have to let everyone do it.' Health and safety codes are too well accepted for that. Some of Mr. Bhinder's co-workers at CN have testified that while they support him in his request to wear his turban, they strongly believe in hard hats, and would not cease to wear their own should Mr. Bhinder win his case.

From a safety and actuarial point of view, the risks have not been shown to be great, but from a human rights point of view, the risks are *enormous.* Freedom of religion is one of the foundation stones of our democracy, and the true test of a democracy is how well it protects the rights of its minorities. Canadian society must be able to find a way, without condescension to let Mr. Bhinder practise both his religion and his trade as a right, not a privilege, so long as in doing so we do not create a problem that is worse than the one we are trying to fix.

No one is arguing that health and safety codes are a

threat to freedom or to human rights. I do argue, and forcefully, that accommodation for human rights can work within the framework of safety codes without compromising either the basis or the substantial application of those codes. All it requires is an elemental amount of common sense and flexibility.

I have on my desk at this moment a letter from a union representative writing in support of Mr. Bhinder, and bringing up a parallel, though not a human rights, case. A certain company's safety regulations require steel-toed safety shoes of all labour and management personnel on the job site. A worker, an insulator, whose work procedures make it unlikely that he would be susceptible to crushing foot injuries, had a misshapen foot, and could not wear steel-toed shoes for medical reasons. After discussions with the union, the company agreed to waive the steel-toe shoe condition of employment for this man.

The concept of *bona fide* occupational requirements means that no employer has to hire a worker who cannot do the essential tasks of a job. At the same time, the needs of a worker who happens to be blind may require accommodation to be made at the work site. Individual assessment is a key element. A hallmark of successful businesses and industries is that they are flexible. It is too much to ask companies to demonstrate flexibility in order to accommodate Canadians' right to worship or the disabled community's right to employment opportunities?

The term '*bona fide* occupational requirements' or '*bona fide* occupational qualifications' is not defined in human rights codes, and there continues to be uncertainty about its application. For several years the test proposed by Professor McKay, chairman of the Ontario Board of Inquiry, Ontario Human Rights Commission *versus* City of North Bay (1976, Ontario Board of Inquiry, unreported) was widely quoted.

To be a '*bona fide* occupational requirement' a limitation must be 'supported in fact and reason based on the practical reality of the work-a-day world and of life.' Though this phrase proved useful to buttress a conclusion in a particular case, it gave little guidance in how to handle future ones.

There are now two major sources that guide the interpretation of '*bona fide* occupational requirement.' The first is the Supreme Court of Canada decision, Ontario Human Rights Commission, Dunlop, *et al versus* Borough of Etobicoke (1982), 40 N.R. 159, a unanimous decision written by Mr. Justice McIntyre.

Certain firefighters alleged age discrimination because they were subject to mandatory retirement at age 60. The employer contended that retirement at 60 was a *'bona fide* occupational requirement' in the interest of the safety of the public, co-workers and the firefighters themselves.

The Supreme Court decided that once a complainant establishes before a 'tribunal' a *prima facie* case of discrimination, he or she is entitled to relief in absence of justification by the employer. The only justification is proof of *bona fide* occupational qualification for the employment, and the burden of proof is on the respondent and made according to the ordinary civil standard of proof, that is, upon a balance of probabilities.

The court set out a two-fold test:

1. A limitation must be made honestly and in good faith and in the sincerely held belief that the limitation was based on adequate performance of the work, speedily, safely and economically and not for reasons that would defeat the purpose of the *Human Rights Act.*
2. A limitation must be related in an objective sense to the performance of the jobs, and reasonably necessary to ensure efficient and economical performance of the jobs without endangering the employee, fellow workers and the public.

If arbitrary general standards are to be implemented they must be based upon evidence that supports the conclusion that, for example, mandatory retirement is justified.

The court outlined the kind of evidence that would be necessary, and concluded it should outline the duties to be performed and the relationship between the aging process and safety and efficiency. Conditions of the workplace and their effect upon employees are important evidence.

Statistical and medical evidence based upon observation or research on the question of aging are more persuasive than the bold statement that firefighting is a young person's game.

In this particular case the court said evidence was merely impressionistic, and upheld the tribunal decision that the 60-year-old firefighters had been discriminated against.

Section 5 of the CHRC guidelines provides: Where an employer devises methods of testing an individual's performance of a job, he or she shall proceed as follows to establish bona fide occupational requirements:

a) identify the essential tasks that make up the requirements of the job;

b) identify the skills and capabilities required to perform essential tasks of the job;

c) use methods that evaluate the ability of the individual to carry out by any reasonable method the essential tasks of the job;

d) set standards that do not exceed the minimum requirements of the job.

Let us consider the question of intent. One of CN's central contentions in this case is that the dispute is strictly a health and safety matter; that, even though Bhinder's desire to wear his turban is based upon religious reasons, the company has no intent to discriminate against him or his faith. With no intent, they reason, there can be no discrimination. The only relevant cause of Bhinder's losing his job was his non-compliance with the health and safety code.

The Canadian Human Rights Commission, supported by the reasoning contained in the dissenting judgement of Mr. Justice LeDain has argued that the question of intent to discriminate does not matter; if an action has a discriminatory effect, that is enough. Intent or lack of intent is not the issue; what counts is the result.

The federal Minister of Justice has recently made remarks that indicate that he agrees with our position; he has indicated that the Department of Justice will no longer argue that the lack of an intent to discriminate automatically means that no discrimination can have taken place.

I would like to just mention some of the research projects that the Canadian Human Rights Commission is sponsoring in order to prepare for the future and in order to aid potential respondents.

In the area of accessibility to employment opportunities and goods and services, a project is underway that will help us assess the 'adaptation plans' provided for by the recently amended *Canadian Human Rights Act.* We are identifying the major components of any comprehensive plan to meet the needs of the disabled community, and establishing principles and performance criteria by which to evaluate plans submitted to us for approval.

We are also working on an extension of the definition and application of *bona fide* occupational requirements as they apply to mental disability, and alcohol and drug dependence. Similar research on *bona fide* justification for denial of goods, services, facilities and accommodations based on disability is also being carried out. In addition, an analysis of health and safety issues is underway to aid us in developing an operational model for assessing risk.

You can see the common thread here. All this work is being devoted to refining practical and quantifiable techniques. I will admit that there is some truth to the accusation that human rights commissions sometimes try to measure the immeasurable. Activities such as the one I have just sketched can help us achieve our ends in very concrete ways.

The work that we are doing must now become more goal oriented. The ideals and principles of human rights are in the statutes. The expectations of Canadians have been raised, and rightly so. If they are to be fulfilled, we, whose business is human rights, must effectively implement our good intentions.

Résumé

On traite du rôle que le corps médical devrait jouer dans la formulation de la législation fédérale sur les droits de la personne dans la mesure où elle se rapporte aux conditions *réellement* requises en matière d'emploi et aux normes d'accès.

Certains cas montrant la nécessité de faire intervenir le corps médical sont présentés.

Annalee Yassi,
M.D., D.O.H.S.

Recent Developments in Workers' Compensation*

Summary

Prof. Paul Weiler, in a recent report on the Ontario workers' compensation system, recommended the creation of a dual system of awards to compensate both wage loss and physical impairment. The principle has been well received, but the details for implementation are controversial. Occupational disease compensation is addressed in his subsequent inquiry. Statistics are presented and short-term improvements are proposed. The concerns and attractiveness of a universal system of cover are briefly mentioned.

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As we all know, occupational health can be quite controversial. Earlier in this conference we talked about human rights in the workplace; we talked about discrimination; and we discussed the debate regarding the scope and dimensions of occupational cancer. It seems so appropriate that we now turn our attention to an institution where the issues and complexities of human rights, discrimination and dreaded diseases such as cancer provide the focus of continuing controversy — the institution to which I am alluding, of course, is the workers' compensation system.

In Ontario much has happened over the past few years. In January 1980, Paul Weiler, Professor of Law at Harvard University and former chairman of the Labour Relations Board in British Columbia, was requested by the then Minister of Labour, Dr. Robert Elgie, to undertake a comprehensive review of the existing *Workmen's Compensation Act* and its administration. In November 1980 Professor Weiler presented his report entitled *Reshaping Workers' Compensation for Ontario,* which contained a number of recommendations. These included simple changes, such as changing the names from the *Workmen's Compensation Act* and board to the *Workers' Compensation Act* and board, as well as major ones, suggesting revision of the structure of benefits in workers' compensation, the manner of financing this system and the structure of decision making at the Workers' Compensation Board. The report was followed by a government white paper in 1981 entitled *The White Paper on the Workers' Compensation Act,* which adopted many of Weiler's proposed reforms, and presented draft legislation for discussion.

With respect to the recommendations regarding the structure of benefits, Professor Weiler proposed raising the level of benefits from the existing level of 75 per cent of a worker's previous gross earnings to 90

*Presented to the First Annual Conference of the Canadian Council of Occupational Medicine, Toronto, November 1983.

per cent of his/her net earnings. He also recommended that a worker's fringe benefits should be maintained, but that other disability benefits that a worker may be collecting should reduce the size of his/her workers' compensation benefit. Changes to the support of spouses and dependants in fatal cases were also suggested. The most controversial of this set of recommendations involved the establishment of a two tier system of benefits providing a lump sum for physical impairment and a disability pension for actual wage loss. Also particularly controversial was the recommended 'deemed' income approach — in other words, the compensation board shall deem a disabled worker to have earned any income that he or she might have received from suitable employment that was available to the worker.

With regards to the recommendations concerning financing of the system, the most important recommendation would institute a mandatory plan for experience rating of individual employers applying principally to injury due to accidents. With respect to the structure of decision making in workers' compensation, the most important recommendations revolve around the establishment of an independent tripartite appeals tribunal and the establishment of an independent medical review panel to deal with the medical issues of compensation. Other recommendations urged that claimants be informed of any difficulties in their files before rejection, and that all parties should be entitled to copies of all material in the board's file.

As stated in the white paper, the principles underlying these proposals for change were the following:

1) The structure of benefits should compensate for actual income lost as closely as is reasonably possible in recognition of the fact that the statute denies workers their right to sue their employers for damages from occupational injuries.
2) The effectiveness and acceptability of the board's internal decision making procedure should be enhanced by providing for external review and participation.
3) Because compensation is at best a poor substitute for prevention, and only a temporary and partial alternative to re-employment, the board's efforts in the areas of accident prevention and vocational rehabilitation should be expanded.

A standing committee of the legislature has been holding hearings all summer and is expected to make its final recommendations about the white paper proposals very shortly.*

Phase II

While Weiler's first report dealt with a range of immediate concerns regarding the level and administration of benefits within the existing system, the second phase of the inquiry addressed the longer-range issues of how industrial diseases should be handled within workers' compensation and the relationship of this program to others involved in the compensation and prevention of disabling injuries to Ontario workers.

Compensating Occupational Diseases

In 1913, when Judge Meredith was first formulating the *Workmen's Compensation Act,* he certainly intended that occupational diseases as well as accidents be fully compensated. However, after thoroughtly reviewing the facts and issues surrounding the compensation of disease claims, Professor Weiler concluded that occupational diseases seem to be the 'soft underbelly' of contemporary workers' compensation. He noted that other than the very contentious issue of permanent partial disability assessments, where the problems relate to benefit levels rather than benefit entitlement, workers' compensation systems have, for the most part, worked fairly well in compensating for disability due to accidents. In the vast majority of cases the claim is allowed and the cheque is in the mail within a few days, as shown in Table 1.

Unfortunately, the same cannot be said for occupational diseases. The average adjudication time for cancer and respiratory disease claims is considerable. Whereas even in the most difficult cases of injury due to accident, the cheque was in the mail within a month or so, the average time for adjudicating cancer claims is about seven months. For respiratory disease claims the adjudication takes almost as long (see Table 2). These facts reflect the

*Since the presentation of this paper, the standing committee has issued its final report. While all parties endorsed the principle of the dual awards for permanent disability, each opposition party criticized the cessation of life pensions implied by wage-loss benefits, and each proposed an alternative dual award approach.

Table 1*

Claims Processing Times[a]

Claim Type[b]	Mean No. of Work Days[c]	% of Total Claims Surveyed
B1	2.5	53.0%
B2	19.8	9.7%
C1	2.4	2.2%
C2 - no secondary input	19.2 (approx. 4 wks.)	28.1%
- secondary input	38.4 (approx. 7½ wks.)	

Notes

a **Source:** Initial Payment Performance Survey, May 1981. Program Planning and Statistical Services, WCBO.

b B1 Form 7 (Employer's Report) is the first piece of mail received.
B2 Form 8 (Doctor's Report) is the first piece of mail received.
C1 Similar to B, except there is a possibility of extended disability in the future.
C2 Extended disability claims.

c Calculated from date first document received at the WCB to date cheque is mailed.

*All the Tables in this paper were taken from A. Yassi, *Occupational Disease and Workers' Compensation in Ontario.* Ministry of Labour (publication pending).

Table 2

Claims Processing Times for Cancer and Respiratory Disease Claims*

- All cancer claims — 28.7 weeks
- Allowed fatal cancer claims — 34.1 weeks
- Respiratory disease claims — 26.9 weeks

*The figures are discussed more fully in Yassi, 1983, op. cit.

difficult nature of adjudicating claims for diseases of potentially multifactorial etiology. And the policies and procedures guiding the decision making process in these claims are extremely controversial.
Compensation cases spark heated debates between medical professionals, between the compensation board and injured workers and even within the legislative assembly. During standing committee hearings on the white paper, so many injured workers came to show their concerns when their representatives appeared before the committee that the hearings had to be adjourned to the lawn in front of Queen's Park.

Perhaps the most telling finding of the study was the following: Only a small percentage of claims overall are rejected by the board, which, aside from those rejected for administrative reasons, amounted to less than two per cent, as shown in Table 3. In

Table 3

Rejection Rates of Workers' Compensation Claims

Total Claims, 1980:	444,674
Category 1: Entitlement rejections	4,673 (1.1%)
Category 2: Administrative rejections*	23,659 (5.3%)
Total rejections:	28,332 (6.4%)

*Category 2 rejections consist of claims which the board deemed should not have been submitted as the business was not covered by the Act, the claimant was an executive officer, there was no record of employment, or other administrative reason.

contrast, the rejection rate for claims for serious diseases is well over 50 per cent. In fact, in the survey of cancer claims about 63 per cent of those adjudicated were rejected (Table 4). The records kept by the industrial disease and dependants section of the board also showed that 63 per cent of the cancer claims adjudicated in 1980 were rejected (Table 5). Fifty-seven per cent of the *fatal* cancer claims reported

that year were rejected (Table 6). For respiratory diseases as well, regardless of which group of diseases were being assessed, the rejection rates were very high. These rates ranged from 35 per cent to up to 86 per cent, depending on the category of respiratory diseases and how the records were maintained, as shown in Table 7.

Table 4

Cancer Claims Included in the Industrial Disease Survey[a] by Last Claim Status

Last Claim Status	No. of Claims	% of Total	% of Those Adjudicated[d]
Allowed	32	30.5%	37.2%
Rejected	54	51.4%	62.8%
Claimant did not reply[b]	5	4.8%	
No action[c]	14	13.3%	
Total	**105**	**100.0%**	**100.0%**

Notes

a. This survey, conducted by the Program Planning and Statistical Services Branch for this Inquiry, includes only claims set up prior to July 1, 1979. Claims were reviewed in reverse chronology from that date. (The date was chosen to allow ample time for the claim to have moved through all the different stages of adjudication).

b. Claimant failed to reply to request for evidence and claim was dropped.

c. These largely consisted of claims that were set up due to excessive exposure to a known carcinogen. Specifically, in this case, exposure was due to a malfunction, however, no disability had yet resulted, and hence the claims have been inactive.

d. Total excludes the 19 claims that were not adjudicated (see b and c above).

Table 5

Cancer Claims Reported to the WCBO in 1980 (and 1981)[a] by Claim Status and Cancer Type

Cancer Type	No. Reported to WCB	Allowed	Denied	Pending
Lung	68 (33)	14 (4)	28 (14)	26 (15)
Mesothelioma	10 (3)	4 (1)	3 (0)	3 (2)
Sinus	4 (3)	2 (2)	1 (0)	1 (1)
Throat	2 (10)	0 (3)	1 (2)	1 (5)
G.I.	7 (6)	0 (1)	5 (1)	2 (4)
Bladder	1 (1)	0 (0)	0 (0)	1 (1)
Skin	2 (3)	0 (0)	0 (0)	2 (3)
Leukemia	1 (1)	0 (0)	0 (0)	1 (0)
Total	**95 (60)**	**20 (12)**	**37 (17)**	**37 (31)**

Source: Industrial Disease and Dependants Section of the Adjudication Branch.

a - parentheses refer to 1981 figures.

Table 6

Fatal Cancer Claims Reported in 1980 by Claim Status and Cancer Type[a]

Cancer Type	No. Reported to WCB	Allowed Old	Allowed New	Denied Old	Denied New	Pending (or no further action)
Lung	26	6	1	10	9	-
Laryngeal	2	-	1	1	-	-
Sinus	1	1	-	-	-	-
Mesothelioma	5	4	1	-	-	-
Leukemia	2	-	-	2	-	-
Prostate	1	-	-	1	-	-
G.I.	3	-	-	1	1	1
Unspecified	68	14	16	14	19	5
		25	19	29	29	
Total	**108**	**44**		**58**		**6**

Notes

a. This Table was derived from the Fatal Claims Record maintained by the Industrial Disease and Dependants Section. The cause of death was listed by a coder from information provided in the claim file, usually from the death certificate.

Table 7

Allowed vs Rejected Non-Malignant Respiratory Disease Claims at the Ontario WCB According to Various Sources

Source	Claims Included	Total	No. Allowed	% [a]	No. Rejected	% [a]	Other Status
Industrial Disease & Dependents Section	All Chest Disability Reported in 1981 [b]	682	311	60	205	40	166 [c]
Sample Survey of Silicosis Claims (for this Inquiry)	Claims in Silicosis Index Set Up Just Prior to July 1979	150	57	41	81	59	12 [d]
	Claims With Diagnosis of Silicosis or Other Pneumoconiosis	81	43	53.1	38	46.9	-
	Claims With Diagnosis of Other Respiratory Conditions	56	8	14.3	48	85.7	-
Sample Survey of Asbestosis Claims (by Peter Barth)	Claims for Asbestosis Only. Set Up Between 1976-1980	101	47	46.5	54	53.5	-
C.O.L.D. in Workers Exposed to SO_2 (List Kept by Chest Disease Consultant)	All Claims for C.O.L.D. Adjudicated Under SO_2 Guidelines Only	30	17	65	9	35	4 [e]

Notes

a. Per Cent is calculated as Per Cent of Allowed Plus Rejected. Claims with 'other' status were excluded from the total.
b. Excluding cancer, but including infective diseases of the chest and acute respiratory illness.
c. Pending.
d. Claimant did not reply, therefore claims dropped.
e. Claim Status not recorded.

Knowing the difficulty of sorting out the etiological agents of these diseases, these rejection rates may not be so surprising. However, even by conservative estimates, the vast majority of occupational cancers seem to be going uncompensated. Taking the figures derived by Doll and Peto, on the percentage of each type of cancer that could be related to occupational

factors, and applying these figures to the Ontario situation, one can get a rough idea of what these estimates would mean for occupational cancer in Ontario. As illustrated in Table 8, the following is seen: Less than 15 per cent of the estimated number of occupational cancers are reported to the board. While one may argue that the technique is not readily transferable from one situation to the other, considering the industrial structure of Ontario, with its steel industry, nickel and uranium mines, asbestos companies, and so on, one must conclude that these figures are likely to be an underestimate of the true extent of occupational cancers in our province.

Similarly, there is growing evidence suggesting that workplace conditions play a larger role in chronic respiratory disease than are currently recognized by compensation statistics. This may be concluded first from the multitude of studies linking specific exposures to damage in the respiratory tract; secondly, from inter-regional differences in chronic bronchitis and pulmonary impairment found, for example by Neri *et al.* in comparing Ottawa to Sudbury; thirdly, from studies revealing an increased incidence of chronic bronchitis in various occupational groups, for example, coal miners, foundry workers, asbestos miners, gold miners, coke oven workers, welders, hemp workers, chemical industry workers and workers exposed to cotton dust; and fourthly, from suggestive evidence in the occupational disease survey conducted by Discher *et al.* for NIOSH in 1975.

Although the plants in that survey were not, by any stretch of the imagination, a random sample, this team of physicians, nurses and industrial hygienists found that only about three per cent of the occupational disease cases they encountered had been reported to a compensation agency. None of the cases of respiratory disease that they felt were work-related had filed for compensation (see Table 9). A fifth source of suggestive evidence was a survey of disabled and non-disabled adults, conducted by the U.S. Department of Labour, in which 16 per cent of the people surveyed with respiratory disability thought their condition to be work-related, even though they had no financial incentive to make such a link (see Table 10). Admittedly, the science of determining occupational causation is fraught with methodological difficulties, but, taken together, these pieces of evidence certainly suggest that the dozen or so allowed claims for chronic obstructive lung disease represents considerable undercompensation.

Table 8

Cancers Reported to the WCBO as Percentage of Total Estimated Occupational Cancers in Ontario, by Cancer Site

Cancer Site	No. Reported to WCBO[a]	No. Reported To SCB as % of Ont. Cancers	No. of Estimated Occupational Cancers	No. Reported to WCB as % of Estimated Occupational Cancers*	No. Allowed as % of Estimated**
Lung	68	2.0	425	16.0	(3.3)[g]
Larynx	2[b]	1.4	3	66.6	
Sinus and other respiratory	14	25.0	10	140.0	(60)
G.I.	7[c]	0.4	153	4.5	
Bladder	1	0.2	37	2.7	
Skin	2[d]	3.0	7	28.5	
Leukemia	1	0.1	56	1.8	
Prostate	0	0.0	10	0.0	
Bone	0	0.0	2	0.0	
	95		**703**	**13.5%**[f]	

* Col. 2 as % of Col 4
** Col. 3 Table 5 as % of Col. 4

Notes

a. Figures from Table 5 were used as in 60% of the claims in Table 6 the cancer site was not recorded.
b. This would be the upper limit of laryngeal cancer reported to the WCBO in 1980. The category 'throat' in the WCB reported statistics may include pharyngeal and tonsillar cancer.
c. This is the total number of G.I. cancer reported to the board in 1980; therefore, it also represents the upper limit of its corresponding category in Table 4.
d. As above; may include melanomas.
e. It is noteworthy that 140% of the 'estimated' occupational cancers in this category were reported to the board. This may either indicate that Doll and Peto's estimate of occupational cancer is too low or that more cancers than are indeed occupational are being reported. As only 6 claims were allowed (Tables 5 and 6), i.e. only 60% of the estimated number of occupationally-related 'sinus and other respiratory' cancers were actually recognized.
f. The number of cancer cases reported to the WCBO represents less than 13.5% of the estimated occupational cancers in Ontario. For reasons discussed in the report (Yassi, 1983, *op cit)*, this is a conservative estimate.
g. Only 3.2% of the estimated number of occupational lung cancers were compensated in 1980. If the figures in Table 6 were used instead, only 1.6% of the estimated number of occupational lung cancers would be compensated. (The latter, representing *fatal* cancer claims, is probably more appropriate).

Table 9

Results of the Occupational Disease Surveillance Study*

	Total Found	Probable Occupational	Employer's Log	Compensation Claim
Respiratory Conditions excluding upper	289	49	1	0

**Source:*
Dischер, D.P., Kleinman, G.D. and Foster, F.J. Pilot Study for Development of an Occupational Disease Surveillance Method, U.S. Dept. HEW (NIOSH), 1975.

Table of results are presented in full and discussed in Yassi, 1983, *Op.cit.*

Table 10

Results from Survey of Disabled and Nondisabled Adults[1]

Percentage of Disabilities Related to Occupational Diseases[2]

Health Condition	Number Disabled from All Causes[3]	Percent Related to Occupational Disease
All	14,316	11.6
Musculoskeletal	5,244	10.7
Cardiovascular	3,084	13.7
Mental	1,273	11.6
Respiratory	1,371	16.1
Digestive	704	18.3
Neoplastic (cancer)	335	1.5
Neurological	252	3.6
Endocrine	275	1.5
Urogenital	289	2.1
Other	1,489	7.9

Notes

1. *Source:* 1972 and 1974 Survey of Disabled and Nondisabled Adults Ages 20-64 in 1972 and 22-64 in 1974. SSA/HEW. Analysis and tabulations prepared by ASPER, U.S. DOL, August 1979.
2. These results were obtained from the 1972 Survey. Followup in 1974 produced remarkably similar findings (e.g. total % related to occupational diseases was 11.3%).
3. Includes severe as well as partial disability.

Without adequate exposure data it is impossible to tell to what extent the workplace is responsible for a particular disease. Even with these exposure data, sorting out the relative contribution of the workplace as opposed to smoking in any particular case is largely speculative. Yet, as Professor Weiler discusses in his report, what gives an emotional edge to the technical issue of how to identify occupational diseases is that riding on this verdict is the difference between a $1,400.00 monthly workers' compensation pension as compared with the barely subsistence level of the Canada Pension Plan at less than $300.00 a month.

The point, however, is that despite the need for certain reforms, Ontario seems to do as well as any other jurisdiction in compensating these serious, but complex, disease claims. Although the figures are not directly comparable for a long list of reasons, the facts seem to indicate that Ontario's record in compensating occupational disease claims is one of the most extensive in the world. In an assessment reported in *The Interim Report to Congress on Occupational Diseases* in the U.S., Ontario ranked second only to Sweden in the number of occupational disease claims compensated relative to the size of its work force. In comparing Ontario to British Columbia within our own country (see Table 11), Ontario's proportions certainly do not suggest undercompensation of serious diseases.

What, then, are the approaches to compensating occupational diseases? Basically, there are two approaches to determining the work-relatedness of disease claims in compensation systems in various jurisdictions. First, claims can be dealt with essentially as a kind of occupational injury, each case assessed on its own merits, often according to a specified definition of occupational disease. The other basic approach involves the use of schedules of diseases. A legal presumption exists that a disease is work-related if the worker was employed in the situations listed opposite the disease in the schedule. However, only 15 diseases are listed in Ontario's Act. The preferred approach in Ontario has been to formulate policy guidelines to delineate the conditions under which a case is compensable specifying the number of years of employment required, the type of processes or industries that are pertinent and so on.

Table 11

Occupational Disease Awards — 1980, British Columbia; Comparable Per Cents Ontario and B.C. by Disease Category

Disease Category	Allowed Claims — B.C.	% of Allowed Disease Claims — B.C.	Comparable Ontario %
Total	**4,212**	**100.0%**	-
Burns		26.3%	29.9%
chemical burns	615		
radiation effects	495		
Fume Toxicity		8.3%	24.3%
systemic poisoning	162		
respiratory irritation	191		
Hearing Loss	364	8.6%	18.8%
Dermatitis	376	8.9%	10.2%
Inflammation of joints, tendons, etc.	-	41.2%	7.6%
bursitis	591		
tenosynovitis	1,042		
carpal tunnel	103		
others	2		
Misc. (conjunctivitis	52	3.8%	4.4%
temperature	59		
extremes, etc.)	51		
Communicable Diseases	62	2.9%	1.8%
Respiratory Diseases		0.7%	1.1%
asbestosis	11		
silicosis	17		
Cardiac Disease	17	0.4%	0.8%
Malignancies	2	0.04%	0.8%

Considering these options, then, if every claim has to be judged strictly on its own merit, the necessary analysis of the scientific literature and the investigation of the industrial processes would have to be undertaken anew for each claim. This, too, would always be subject to challenge from the employer. As Professor Weiler has pointed out, not only would this be a needless waste of resources of the workers' compensation system to the detriment of this and other claimants, but it would erect far too high a barrier for individual claimants, even when there should be no doubt about an occupational relationship. This is borne out by the fact that only 10 cases of occupational cancer have been compensated in the history of the Workers' Compensation Board that were not addressed by the schedule or by policy guidelines, even though the latter still covers only a fraction of the internationally recognized carcinogens. This fact, plus the experience of Ontario's tort law, has led Professor Weiler to conclude that when a decision that there is an occupational connection is made, this should be expressed in a general presumptive standard that would be attached to the *Workers' Compensation Act,* carrying the weight of law and accessible by all parties.

Of course, cases that do not fit the standard should still be adjudicated on their own merit. Professor Weiler notes that 'while the question of whether a particular disease stems from the workplace is scientific in character, often the answer cannot yet be derived from the existing body of scientific knowledge. The fact that the scientific evidence is unclear or debatable should no more support the negative than the positive conclusion.'

In the same spirit that led to the proposals for an independent workers' compensation appeal tribunal and outside medical review panels in Phase I of his inquiry, in his second report Professor Weiler has proposed an industrial disease standards panel to deal with the problem of occupational diseases. The panel envisioned would consist 'not only of medical specialists, but also of a clinician who must diagnose the disease, an engineer familiar with industrial processes, a hygienist who must investigate the actual exposure at work and a lawyer who has experience in decision making on the basis of practical probabilities rather than scientific certainty.' The panel would have

a budget to commission research and would hold hearings to seek public input.

But even so, workers' compensation will always fall short in the identification of occupational diseases. This system is perpetually prone to undercompensation for, as we all know, science itself is always running well behind reality. Hundreds of new chemicals are introduced into the workplace every year, and, with new technology, the patterns of diseases are ever changing. The latency factor poses an ongoing problem as well. Furthermore, even when a marginally increased risk is established, each individual case must still be decided on the basis of statistical probabilities. Perhaps most importantly, a compensation program that is founded simply on occupational causation is inherently incapable of dealing with the fact that serious disabling diseases are usually multi-causal in character. Thus, the only way to ensure that all victims of disease in which occupational factors may have been contributory are able to collect benefits is to establish a comprehensive disability plan in which a test of causation is not a prerequisite for collecting. But perhaps the single biggest argument in favour of a comprehensive insurance scheme is the desire for equity. Why should an individual whose disability stems from the workplace be treated differently from a worker whose disability originates elsewhere?

Many trade unions and injured workers' groups are sceptical of this idea. Their concerns include:

1) The fact that levels of benefits would no doubt be lower than the current workers' compensation awards.
2) They do not like the idea of 'letting the employer off the hook.' They feel that if business is responsible for the disease, business, not the workers or society at large, should bear the cost.
3) They are worried that a system that is not based on causation will dull the incentive for research and prevention.

Some employers' groups have also voiced their concerns:

1) The philosophy of social assistance, with which the scheme is sometimes associated, makes the system seem unappealing to them.
2) They are concerned about the cost factor.

As Professor Weiler explains at length in his report, many of these concerns are not well founded. For example, he has introduced the concept of an emissions fee, which could be charged to individual firms for any hazardous exposures to their employees. The point is that 'there are two sides to any disability plan: payment of benefits and financing of the scheme. Only the second need be specifically tailored for prevention.' Professor Weiler has expressed the principles on which he believes a comprehensive disability plan should be founded. Putting these ideas on the agenda of public policy is, perhaps, one of the most significant of recent developments in workers' compensation.

Résumé

Dans un récent rapport sur le système d'indemnisation des travailleurs de l'Ontario, le professeur Paul Weiler recommande la création d'un système double qui consisterait à compenser la perte de salaire ainsi que l'incapacité physique. Ce principe a été bien accueilli, mais les détails de sa mise en application sont sujets à controverse. Son enquête suivante porte sur l'indemnisation des maladies professionnelles. Cette étude donne des statistiques et propose des améliorations à court terme. Les problèmes et le côté attryant d'un système universel d'assurance y sont brièvement mentionnés.

Lucie Pépin

Women in the Workplace and Occupational Health Hazards*

Summary

As new technology invades those workplaces that have traditionally been dominated by female workers, it is bringing with it occupational health hazards that are, in many respects, somewhat different from those that affect male workers, and also somewhat different from those that have traditionally been defined as occupational health hazards.

Women now make up 40 per cent of the Canadian work force, and the urgency of addressing the occupational health hazards that confront and particularly concern female workers is stressed. The approaches available to women to combat these health hazards is discussed.

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Bonjour.

It is a great pleasure to be here today. I very much look forward to speaking to you on women in the workplace, because as president of the Canadian Advisory Council on the Status of Women, the economic situation of women is one of my greatest concerns. However, I am a nurse by profession and, as such, I am particularly happy to be in the familiar milieu of health care once again. I intend to take advantage of this unique opportunity to situate my discussion of women in the workplace within the context of occupational health.

The experience of women in the work force presents us with numerous possibilities for addressing the issue of occupational health hazards in new and alternative ways. It is these possibilities that I would like to raise with you today.

In beginning, I think it is important to establish, and for all of us to accept, that women are a permanent part of the labour force. Over 50 per cent of all Canadian women work. They now make up 40 per cent of the entire Canadian labour force. The majority of these women are not unmarried and/or childless. On the contrary, only 30 per cent of the female labour force is single, with the remaining 70 per cent being married, separated, divorced or widowed.

The majority of these women work out of financial necessity. Women's salaries are crucial to family well-being. Often, they are vital. The National Council of Welfare has determined that there would be a 51 per cent increase in the number of poor families in Canada if wives did not work for pay. The council published a study last February that estimated that 40 per cent of married women rely on their own employment earnings as their major source of income.

We also find that single female parents are very often the prime economic providers for their families.

*Presented to the First Annual Conference, Canadian Council of Occupational Medicine, Toronto, November 11, 1983.

Eighty-three per cent of all single parent families are headed by women, and now, with four out of 10 marriages ending in divorce, indications are that this percentage will increase in the future.

While 50 per cent of women are now in the labour force, a Gallup poll commissioned by the council establishes that this percentage would be even higher if more job opportunities were available. Our poll found that 60 per cent of women with at least one child under five years old and 71 per cent of women with at least one child between five and nine years old would accept paid employment if such opportunities were available to them.

I hope that this barrage of statistics has confirmed that women are a serious and integral component of the work force. Therefore, in my view it is imperative that we address the occupational health hazards that confront and concern them.

Occupational health hazards have lately become a particularly urgent concern among working women as new technology invades those workplaces that have traditionally been dominated by female labour. Sixty-two per cent of women work in the clerical, service or sales sector of the economy. Eight per cent of them work in factories. Thus the occupational health hazards that affect them are, in many respects, somewhat different from those that generally affect male workers. They are also somewhat different from those that have traditionally been defined as occupational health hazards. For example, women are less exposed to the immediate physical accidents whose debilitating effects are instantaneous and evident, such as loss of limbs or external body functions.

Occupational hazards that confront women are, by and large, those conditions of the work environment that have fewer immediate and visible effects, but which are cumulative, and thus increasingly dangerous in the long term.

Let me give a brief and general overview of the types of occupational health hazards affecting women. There are chemical hazards, including anaesthetic gases, lead, vinyl chloride, asbestos, solvents, photocopy chemicals and cleaning solutions, all of which may be found in factories, health care facilities, offices, schools, cleaning plants and day-care facilities. There are biological hazards, such as fungi and human and animal diseases, which can be found in health care facilities, meat packing plants, factories

and cleaning plants. There are physical hazards, including radiation, temperature extremes, vibration and noise, which are found in offices, health care facilities, cleaning plants, factories and food service facilities. Finally, there are the psycho-social hazards, which are induced by stress, hours of work, nature of supervision, complexity of work tasks and physical work conditions. These hazards can be present in any workplace.

I would like to concentrate in some detail on the latter two categories, that is, physical and psycho-social hazards, because it is these hazards that affect most women in the work force and that have thus served as a major stimulus to developing women's awareness of occupational health hazards and their approach to combatting them.

In illustrating how these hazards affect women, I would like to share with you findings from the council's recent comprehensive study of women in the work force entitled *A Working Majority,* which I referred to earlier. To give you a few examples: Temperature extremes frequently pose problems for waitresses and cooks, some of whom reported working in 100° F temperatures in the kitchens while customers dined in air-conditioned surroundings. Temperature extremes are often regular conditions within cleaning plants, where workers function in temperatures as high as 120° F. Also, loud, persistent noise levels were reported by a wide variety of factory workers, including chicken and fish processors and paper packers. Office workers mentioned noise in a small work area from constantly ringing phones, and typewriters. Bank workers complained of headaches caused by the constant sound of computer terminals.

Fluorescent lighting often causes headaches. Some workers have reported the need of changing eye glass prescriptions every six months as a result of such lights. Poor ventilation, particularly in office buildings, has caused women to suffer from perpetual headaches, drowsiness and faintness. New word processing equipment has raised the spectre of possible ill effects from VDTs. However, the noise, lighting and overall physical layout of word processing units are already evident dangers of the new technology.

Microtechnology allows for a constant monitoring of the work efficiency of each employee and thus places continuous pressure on the employee to increase her or his level of production. These conditions alone have brought about extremely high

levels of physical and mental stress among women workers. I recall, in particular, the experience of one female telephone operator who, after working under such conditions for several months, returned home one evening and began banging her head against the wall. Luckily, her husband was there to stop her. She later quit her job.

However, quitting is hardly an effective solution to such a situation, for the problem still remains. The stress and tension resulting from unduly pressured work situations such as this one can lead to drug and alcohol abuse as well as to tensions within the family. All of these factors in turn lead to increased stress on the job.

What solutions do women have for addressing these and other occupational health hazards? In seeking to answer that question, the first point that I must make is to emphasize the importance of approaching occupational health hazards not as short-term individual crisis occurrences but rather as long-term overall conditions that increasingly erode the productivity of a worker. In our view, it is necessary to take a larger approach to the issue of occupational health hazards and look at the whole environment of the worker. We must recognize the mutually reinforcing impact of stress in the workplace and stress in the home. Treating only the acute and outward symptoms of any occupational health hazard results in no real solutions, for recurrence is inevitable. Any permanent solution requires a broader approach.

As much as I hesitate to apply labels because they can serve to oversimplify or distort meanings, the term that most aptly describes the approach that women favour in addressing health hazards is that of the preventive approach. Women active in the area of occupational hazards are convinced that it is the preventive approach that most fully addresses the definition of health adopted by the world health organizations, which is, as you all know, 'a state of complete physical, mental and social well-being.' In Canada, we have already seen the preventive approach successfully applied to occupational health in combatting alcohol abuse.

What other means do women propose for applying the preventive approach to occupational health hazards? Let me outline a few of our proposals.

Within individual workplaces, some women have formed on-the-job groups that enable women employees to work together in identifying common

health problems. These groups seek to eliminate occupational health hazards by bringing their findings to the attention of management, and working co-operatively with management to rid the workplace of such hazards. Where there are collective agreements in effect, these women's groups have attempted to address health concerns in their contracts and to establish employee-management committees to deal with hazards on an on-going basis.

Outside of the individual workplace, women have formed health networks to inform women of occupational and other health hazards; to research, where possible, occupational and health issues and to lobby for government action on these concerns.

Research is a particularly urgent concern in my view as there has been a serious lack of investigation into occupational health hazards. Regarding chemical hazards, one 1976 estimate suggested that, of the more than 400,000 chemical products used in world industry, only 13,000 had been examined and classified by the United States National Institute for Occupational Safety and Health. Only 400 of these chemical products were covered by United States occupational health standards. Physical and psycho-social hazards have received even less research attention. Since 1977 the Canadian Advisory Council on the Status of Women has called upon the federal government to sponsor further research into health and safety in the workplace. We are particularly anxious that testing be done not simply in laboratories, but in the workplace as well.

The advisory council and other women's organizations are also seeking to redress occupational hazards through legislation. As you may know, last November the council published a major report entitled *Reproductive Hazards at Work: Men, Women and the Fertility Gamble,* which indicates that men as well as women are affected by reproductive hazards in the workplace.

Among our legislative recommendations to the federal government were: Firstly, that a single standard for each hazard be established that would ensure maximum protection for the most susceptible worker of any age or sex; secondly, that the federal government ensure that such standards are met in any area under its jurisdiction; thirdly, that the Atomic Energy Control Regulations establish the same level of radiation for females and males to protect the reproductive health of all; and fourthly, that the federal government ascertain the effect of the Charter

of Rights and Freedoms in opposing discrimination within employment on the basis of reproductive physiology.

We believe that legislative solutions to occupational hazards must also address the larger social context of women in the work force. We have just finished a research study on parental benefits and will soon be making legislative recommendations to the government that include the proposal that women and men be equally qualified for both parental leave and payment schemes on the birth of a child.

Women need support, your support in particular, in order to successfully implement the alternatives that I have just outlined, and to apply more widely a preventive approach to occupational health care. I would like to suggest, in closing, three further reasons to support the preventive approach.

The first reason concerns productivity. From a management point of view, I ask this question: Can the full output potential of an employee ever be realized as long as that employee is constantly subject to, and thus continually weakened by, chemical hazards, biological hazards, physical hazards and psycho-social hazards?

My second reason also addresses a management concern, and that is cost. While some may argue that the costs of acting on a preventive approach are high, let me point out that the costs of *not* acting are even higher. In the short term, for a single enterprise, expenditures in implementing preventive measures are quickly redeemed. Here let me give you a concrete example. An American industrial company that added a preventive care nurse to its company's health service has estimated that the addition of that nurse has saved $3,621 a month in such areas as medical examinations and lost work time.

From a broader perspective, I also suggest that in the long term, the savings from such measures will be very substantial. The years ahead will be characterized by an increasingly aging population, and we have already begun to look at the huge costs that will be involved in providing the necessary health and social services for a large number of older people. Imagine how much higher these already enormous costs will be if elderly people are in poor health due to working in adverse conditions throughout their lives!

As both these short-term and long-term examples suggest, as long as we hesitate to adopt preventive measures we will be increasingly faced with the necessity of treating acute problems through crisis

care. It has been illustrated time and again that the costs of crisis care are extremely high.

In many ways, the presence and experience of women in the work force offers us an aperture through which to see the work world of the future. In 1946, only 25 per cent of Canadian women were in the labour force. As women moved rapidly into the work force from 1946 onward, they largely entered into the new information-handling sectors of the economy, which have grown dramatically over the years so that today we are in the midst of a new economic revolution based on information.

It is a different work world, with different occupational problems, which accordingly demand a different understanding of occupational health hazards. Women have predominated in the information work force from its beginnings. Thus, the proposals we make, based on our work force experience, may very likely address those conditions that will become the norm for the majority of all workers in the Canadian labour force of the future.

You know, if we do not capitalize on this experience of women, I fear that all of us may be in the same predicament as the proverbial Little Miss Muffet, who sat on a tuffet eating her curds and whey. Along came a spider, who sat down beside her and said 'Curds have cholesterol, whey is fattening and sitting on that tuffet will give you back trouble before you are 40.'

In other words, let us act now, before we become what we eat, breathe, ingest or whatever else besieges us in our everyday working lives.

Merci.

Résumé

La nouvelle technologie qui envahit les emplois traditionnellement occupés par les femmes apporte avec elle des risques professionnels qui sont, à de nombreux égards, un peu différents de ceux qui affectent les hommes et aussi un peu différents de ceux qui ont été traditionnellement définis comme des risques professionnels mettant en danger la santé des travailleurs.

Les femmes forment maintenant 40% de la main-d'oeuvre canadienne et elles doivent sans attendre faire face aux risques professionnels mettant leur santé en danger. Voici un exposé des solutions que les femmes peuvent choisir pour combattre ces risques.

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News and Notes

Occupational Health Branch Laboratory Proficiency Testing Program

The Occupational Health Laboratory of the Ministry of Labour has obtained a dust and vapour chamber from SRI, California, a chamber very much like the one used to generate samples for the NIOSH-Proficiency Analytical Testing program. The Occupational Health Laboratory wishes to use it to generate air samples for those corporate and consulting laboratories that wish to determine proficiency in analysis.

The chamber operates on a dynamic dilution principle. Clean, compressed air is fed into a primary dilution chamber along with the compound of interest, which may be dust, a solvent or an aqueous solution of a metal compound. The injected matter is converted into an aerosol or air solution and passed to a sample rationing line, which connects with three conical chambers. Each cone expands to a wide base where twelve sampling ports are situated to collect air samples. Contaminated air is drawn from the rationing line into the cone and through sampling media by a metal bellows pump, which returns the now clean air to an exhaust manifold. Make up air, equal to that vented to the exhaust line, is fed into the rationing line between the first and second conical chambers so that the second cone samples air at a lower concentration. A duplicate system exists for the second cone so that the third cone samples air at an even lower concentration.

In total, 36 air samples can be collected, 12 at each of three concentrations. Critical orifices are installed on the air sample line for every sample collected and at appropriate points in the overall distribution system. Typically the second and third cones sample air at one-half and one-quarter the concentration of contaminant in the first cone. There are arrangements for humidity control and real time monitoring of organic contaminants.

Initially the proficiency testing program will be restricted to substances that are now or soon will be regulated. Participation is entirely voluntary. In order to determine the support for this program in the

province and to develop the logistics to run the program efficiently, the laboratory would appreciate receiving letters from interested parties stating the substances for which samples are required. The terms of reference for the program will be decided and announced at a future date with input from participants. If you are interested, please write to:

M.A. Nazar, Ph.D., P.Eng., C.I.H.
Chief, Occupational Health Laboratory
101 Resources Road
Weston, Ontario M9P 3T1

Proposed Canadian Pneumoconiosis X-Ray Reading Panel

The International Labour Office (ILO) 1980 code for classifying chest X-rays of the pneumoconioses is already used by many occupational chest physicians in Canada as well as in the United States and Europe. But in contrast to the practice in the latter areas, there is no Canadian standard for maintaining a uniform quality of reading. The Ontario regulations on asbestos and silica under the *Occupational Health Act* require that X-rays be read by 'approved readers' of the ILO code, even though the details of approval are not described. The omission relates to the time of introduction of the regulations when no approval mechanism was in place, even though one was being planned.

Work is now well underway to forming the first Canada-wide panel of readers who can be expected to categorize pneumoconiosis films within the close allowable limits of agreement. The sources of possible disagreement between interpretations depend not only on differences in perception from time to time within the same reader, but also on differing views between individuals and on different approaches among provincial, national and international jurisdictions.

Dr. David Muir of the Occupational Health Program at McMaster University and Dr. Jaan Roos of the chest service at the Ontario Ministry of Labour have obtained the agreement and support of a nucleus of occupational medicine colleagues in all provinces to proceed with the start of a quality control program for any physicians who wish to take part.

The ILO has already published a set of 22 reference films, which form a comparison standard for reporting X-rays in suspected dust-related chest disease. It is clear, however, that reference films alone do not

suffice to establish uniform reading patterns. Instruction, feedback on the reading levels of other interpreters and occasional group reading sessions will all improve both intra- and inter-observer variation.

In the United States, standardization is attempted by an examination scheme, with recent proposals for requalification every three years. In Great Britain, a geographically centred small group of readers are given a standard reading level by the chief of the group. It appears that both approaches have sometimes led to problems, either in sustaining even quality after the examination or in maintaining uniformity of reading in international comparisons. The Canadian proposal hinges on the collection of some 500 X-rays showing a mixture of pneumoconioses and normal patterns. Selections of films from this group are to be sent regularly to participating doctors who will code them. Their reports will then be processed in the Ministry of Labour computer, and their own as well as the mean reading levels of other members of the group will be reported back, expressed by appropriate statistical conventions. It is hoped that this will gradually lead to a 'drawing to the middle', with the extreme readers evolving nearer to mean levels through a continuing feedback process. From time to time, personal contact will be necessary and this can well be made by group reading sessions at an annual meeting, which is normally attended by most of the panel. Mailing and computer services for the program will be offered by the Ontario Ministry of Labour.

Most of the already collected abnormal X-rays emphasize the difficult lower range of early small nodular and irregular opacities. Collecting definitely known normal films from the required age groups has been, surprisingly, a slower task. Once the system has been established and tried, physicians will again be invited to join the panel if its aims are relevant to their work.

The 'ILO code' is best likened to a yardstick. If used properly, it provides a reasonably reproducible way of describing appearances on a chest film — but it says nothing about diagnosis and it is by definition not to be used directly for compensation or disability evaluation purposes. Those matters must be determined by considerations of medical findings, exposure history and administrative protocol, all of

which remain matters for local jurisdictions to pursue. The ILO code does, however, provide a standard terminology and a uniformity of reading levels to help in facing these ultimate tasks.

Educational Resources for Pulmonary Function Technology in Ontario

Respiratory disease is a potential problem for every resident of the province. Air pollution, inhalation of cigarette smoke, either passively or by smoking, and exposure to harmful substances in the workplace make lung disease a possibility for anyone in Ontario.

The instrumentation to screen for the beginnings of respiratory problems has been available for many years. However, the technologists to perform the tests have not been nearly as available as the equipment. Until three years ago, the only means of learning pulmonary function technology was by working at one of the major teaching hospitals or by taking the formal course for Respiratory Technology, which is a different profession dealing with treatment rather than testing procedures.

In 1973 the first examination for Pulmonary Function Technology was held in Ontario, with both written and practical portions having to be successfully completed for registration. These first examinations were made available through the Ontario Society of Pulmonary Technologists. Several years later the society became a national organization, and now encompasses cardiovascular testing as well. The Canadian Society of Pulmonary and Cardiovascular Technologists (CSPCT) continues to offer registry examinations each year in both disciplines. In 1982 the first apprentice program for pulmonary function was initiated. Conducted at Toronto General Hospital, and based on the CSPT curriculum for registry eligibility, this program provides training for two students every eight months. At its completion students are eligible to write the next available examination and become registered pulmonary technologists. These examinations have produced a solid bank of skilled technologists who are at home in all phases of pulmonary function testing from blood gas analysis to body plethysmography.

All this proved beneficial for research and routine pulmonary function laboratories that required a high degree of skill for a multitude of test procedures. However, these technologists were not readily

available to industry to conduct initial screening for lung disease. The screening procedure has gradually become one of the duties of the occupational health nurse, and, until 1980, the training for basic spirometric testing was sketchy at best. In that year the formal three-day course 'Pulmonary Function Testing in Industry' was born. The University of Toronto School of Continuing Studies sponsors this program, and it is approved by the Canadian Society of Pulmonary and Cardiovascular Technologists. For three days the participants alternate between lecture and workshop sessions that are designed to give background knowledge as well as technical skill.

Spirometry is a deceptively easy-sounding test. However, understanding the results of the test and producing a test that meets all the criteria for adequacy is another matter. In fact, the physiology behind spirometry is complicated, and the technical aspects of basic screening are many. During the three-day course the students meet concepts that come from physics, chemistry, electronics, mathematics and psychology. This is a tall order and would be almost impossible were it not for the previous training of the nurse. By the end of the course the student is trained for spirometric procedures, the calibration and maintainance of the equipment and calculation of results corrected to body temperature, and has been introduced to interpretation of these results.

This particular course has been well received and has helped to raise the quality of pulmonary screening done by industry across the country. It is held twice each year at the School of Continuing Studies, University of Toronto, and is taught by physicians and registered pulmonary technologists. The program offered follows course guidelines set out by several occupational health groups for the teaching of spirometry. Upon completion of this course the registered nurse is given eight hours credit toward a specialty in Occupational Health Nursing.

Full pulmonary function testing is still limited to hospitals and a few private clinics, and industrial screening is becoming the domain of the Occupational Health Nurse. However, the educational resources in Ontario have been developing along with the need for such resources, and will continue to expand as the need for extended training becomes apparent. Discussions, currently in the preliminary stages, with community colleges in Ontario are aimed at

developing a formal course to train technologists outside the hospital setting. These discussions will bear fruit and the course will become a reality only if there is a need for more trained technologists and if graduates can be assured of finding employment in the field.

International Ventilation '85

The 1st International Symposium on ventilation for contaminant control is being held in Toronto, Canada on October 1-3, 1985. The symposium is being sponsored by Industrial Hygiene and Hazard Control Engineering of the University of Toronto and the Air Pollution Control Association, Ontario Section.

The theme of the conference is new technological development on a worldwide basis in the contaminant control field. The organizing committee requests technical papers of high quality for this symposium. A 400 to 500 word abstract is required by August 1, 1984.

Please address all inquiries for further information on the symposium and for the submission of abstracts to the symposium chairman:

Dr. H.D. Goodfellow
International Ventilation '85
c/o Hatch Associates Ltd.
21 St. Clair Avenue East
Toronto, Ontario M4T 1L9
Canada
Telephone (416) 962-6350

Dermatitis in the Printing Industry

The report of a recent pilot study by Prof. J.D. Nethercott, *et al.* on Dermatitis in the Printing Industry has been placed in the Ministry of Labour Library and regional office reading rooms, and is available for public view.

Sixth Five-day Workshop in Industrial Hygiene

The Sixth Workshop in Industrial Hygiene, to be presented at the University of Toronto, is designed for professional occupational hygienists who, perhaps as a result of specialization, feel the need for a general refresher course, for recent entrants to the hygiene field who wish to broaden their background knowledge and for all those concerned with the

administrative aspects of occupational health and safety who wish to rapidly acquire an understanding of industrial hygiene.

The workshop is organized by the Department of Chemical Engineering and Applied Chemistry and will be held Monday, September 24th through Friday, September 28th, 1984. The panel of lecturers includes Dr. John Steel, Dip. Occ. Hyg., of Newcastle upon Tyne, United Kingdom and the faculty in the University of Toronto. Dr. Melvin First of the Harvard School of Public Health will deliver a banquet address on 'Engineering Controls of Occupational Hazards'. The expertise of the 14 speakers covers all the relevant aspects of hygiene, human factors engineering, toxicology and occupational medicine. A hands-on equipment demonstration is included in the workshop. The problem of coping with Ontario's designated substances will be specifically addressed.

The Industrial Hygiene and Hazard Control Engineering Program of the University of Toronto is presenting the workshop in association with the Canadian Society for Chemical Engineering, the Occupational and Environmental Health Unit, Faculty of Medicine, University of Toronto, and the Industrial Accident Prevention Association of Ontario.

Enquiries should be addressed to:

Professor J.W. Smith, C.I.H.
Department of Chemical Engineering and Applied Chemistry
University of Toronto
Toronto, Ontario
M5S 1A4
Telephone: (416) 978-3066

Registration of Professional Occupational Hygienists in Canada

A steering committee to prepare and implement a co-ordinated plan for the establishment of a national registration organization for professional occupational hygienists in Canada has been formed. The members of the committee are:

Dr. H. Buchwald — Alberta Workers' H and S Compensation
Mr. N. Pellerin — Domtar Incorporated
Dr. J. Purdham — University of Toronto
Mr. G. Rajhans — Ontario Ministry of Labour
Mr. A. Riegert — Workers' Compensation Board of B.C.

Mr. C. St-Pierre — Commission de la santé et de la securité du travail du Québec
Mr. R. Stacy — Imperial Oil Limited

The following are the mandates:

Mission
To develop a national system for registration of Canadian professional hygienists.

Accountability
The steering committee shall be autonomous. This autonomy will, in effect, serve to make the committee accountable to the whole occupational hygiene community in Canada.

The steering committee shall disband immediately after its mission has been accomplished, transferring all legal and fiscal responsibilities to the organization yet to be established.

Scope
The steering committee shall:

1) identify and describe the elements of a national registration system for occupational hygienists in Canada,
2) prepare and implement a co-ordinated plan for the establishment of a national registration organization for professional occupational hygienists in Canada.

Ontario Medical Association of Canada 2nd Annual Scientific Meeting Montreal, November 28-30, 1984

The 2nd Annual Scientific Meeting of the Occupational Medical Association of Canada will be held at the Bonaventure Hotel, Montreal.

The host group will be l'association des médicins du travail Québec.

Further information may be obtained from:

Dr. Michel Joncas,
1028 chemin du Lac Lery
Longueuil, P.Q.
J6N 1A8

Regulation for X-ray Safety, Registration and Plan Review

The Regulation for X-ray Safety, Registration and Plan Review O. Reg. 263/84 under the *Occupational Health and Safety Act* has come into force.

This regulation and its companion, the X-ray Safety Code, O. Reg. 45/84, made under the *Healing Arts*

Radiation Protection Act, are complementary regulations that require the registration of all X-ray sources in Ontario under Provincial jurisdiction. The X-ray Safety Code applies to facilities used for medical, dental, chiropractic and podiatric purposes while the regulation applies to all other X-ray facilities, such as those used for industrial, veterinary, educational and research purposes.

The provisions of both regulations are similar in most respects to the former regulation for X-ray Safety, Reg. 855, R.R.O. 1980, under the *Public Health Act* that has now been revoked. These new regulations are the first steps towards the implementation of a comprehensive regulatory strategy for the control of the exposure of workers, patients and the public to the hazards of X-rays.

The X-ray Safety, Registration and Plan Review Regulation provides for

(1) the registration of employers that use X-rays;
(2) the review and acceptance of plans for the location of all permanent X-ray sources;
(3) notification by employers of the acquisition and use of portable and mobile X-ray sources; and
(4) notifications by vendors, suppliers, lessors of the delivery of X-ray sources.

More comprehensive regulations are currently being prepared under the provisions of the *Occupational Health and Safety Act* and the *Healing Arts Radiation Protection Act* for the protection of workers, patients and members of the public who are exposed to X-rays.

Technical inquiries with respect to the regulation may be directed to:

The X-Ray Regulation Project
Ministry of Labour
400 University Avenue
Toronto, Ontario
M7A 1T7
(416) 965-8510

Call for Papers

The editor of *Occupational Health in Ontario* will be pleased to consider for publication in this journal hitherto unpublished papers by qualified professionals on any aspect of occupational health.

When submitting your manuscript please follow the instructions to contributors on the title page of this issue.

Coming Events

August 19-25, 1984	International Epidemiological Association Xth Scientific Meeting, The University of British Columbia, Vancouver, British Columbia, Canada. For further information contact W.M. Garraway (Secretary, IEA), Mayo Clinic, Dept. of Medical Statistics and Epidemiology, 200 First Street S.W., Rochester, Minnesota, 55905, U.S.A.
August 20-24, 1984	Third International Conference on Indoor Air Quality and Climate — Stockholm, Sweden. Details from Mr. P.R. Warren, Building Research Station, Garston, Watford, WD2 7JR. Tel. 09273 74040.
September 9-14, 1984	21st International Congress on Occupational Health, Dublin, Ireland. Details from Dr. C.S. Macnamara, Organizing Secretary, XXI International Congress on Occupational Health, 44 Northumberland Road, Dublin 4, Ireland.
September 10-14, 1984	IXth Congress of the International Association of Agricultural Medicine and Rural Health, Christchurch, New Zealand.
September 20-21, 1984	British Toxicology Society — Symposium —Occupational Health and Toxicology — University of Newcastle. Contributions invited from SOM members. Details from Mr. E.A. Lock, ICI Central Toxicology Laboratory, Alderley Park, Macclesfield, Cheshire, SK10 4TJ. Tel: 0625-582711, ext. 258/247.
October 1-3, 1984	Ventilation '85, 1st International Symposium on Ventilation for Contaminant Control, Royal York Hotel, Toronto, Canada. For details contact Dr. H.D. Goodfellow, Hatch Associates Ltd., 21 St. Clair Ave. East, Toronto, Ontario, Canada M4T 1L9
October 14-18, 1984	International Conference on Occupational Radiation Safety in Mining, Toronto, Ontario, Canada.
October 15-17, 1984	International Conference on Organic Solvent Toxicity Stockholm, Sweden.

October 29 - November 2, 1984	1984 Ontario Occupational Health Nurses' Association Conference, Cleary Convention Centre, Windsor, Ontario, Canada. For further information contact Lorraine Carnelos, Reg.N., ECOHNA, 1600 Lauzon Road, Windsor, Ontario N9A 6R9.
November 28-30, 1984	2nd Annual Scientific Meeting of the Occupational Medical Association of Canada, Bonaventure Hotel, Montreal, P.Q., Canada. Further information contact Dr. Michel Joncas, 1028 chemin du Lac Lery, Longueuil, P.Q., J6N 1A8.
December 3-5, 1984	Inter-Noise 84 — 13th International Conference on Noise Control Engineering — Honolulu. Details from the Inter-Noise 84 Secretariat, P.O. Box 3649, Arlington Branch, Poughkeepsie, NY 12603, USA.

Ontario Ministry of Labour

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